MAINTAINING VIABLE POPULATIONS OF WILD HORSES IN THE WARM SPRINGS HERD MANAGEMENT AREA ENVIRONMENTAL ASSESSMENT EA OR-025-98-00

BURNS DISTRICT OFFICE
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ENVIRONMENTAL ASSESSMENT
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I. INTRODUCTION

The Three Rivers Resource Area proposes to remove excess wild horses from the Warm Springs Herd Management Area (HMA). This area is located approximately 30 miles southwest of Burns, Oregon, in Harney County. Gatherings in this HMA have been taking place rather regularly for over 20 years; the most recent in November 1996. This Environmental Assessment (EA) will assess any new information that has surfaced regarding the resources in the HMA, changes in the condition of the herd and changes in horse herd management.

A. Purpose and Need

Removal of excess wild horses in the Warm Springs HMA has taken place periodically to achieve Appropriate Management Levels (AMLs) which not only maintain a thriving ecological balance between the horses and their environment but also a viable, vigorous, and stable population. Monitoring studies indicate that the increasing herd size is having a negative impact on herbaceous and shrubby vegetation in the Dry Lake, Buzzard Canyon, and Jack Mountain areas in the uplands (Appendix A) and Buzzard Creek riparian area. If horse numbers are permitted to continue to increase, a downward trend in some of the plant communities is likely to occur.

Wild horse numbers currently exceed the AML within the HMA and additional resource damage would occur if excess horses are not removed. The AML for the HMA is 111 to 202 head. The 1999 estimate for the HMA is 226 horses. Historic observations and monitoring indicate that herd growth is generally 20 percent annually. A census conducted by helicopter on June 26, 2000, counted 324 head.

The negative impacts to vegetative resources at and around watering areas and certain upland areas, primarily Buzzard Creek, Round Butte, Dry Lake, Buzzard Canyon, and the Jack Mountain areas are becoming increasingly evident, showing up as severe grazing and trampling around open water. Year-round grazing by increasing numbers of wild horses on the native bunchgrasses is having an adverse effect on plant vigor and seed production and increases competition for forage with wildlife and cattle in areas where the horses concentrate. Plants are not able to complete their basic life cycle or replenish their root reserves.

A large band (approximately 100 horses currently) has concentrated and been located in the Buzzard Creek area since 1996. Allowing horse numbers to increase indefinitely could jeopardize herd health, vigor, and viability.

Managing herd numbers within AML is necessary to be in conformance with the existing land use plan, the Warm Springs Herd Management Area Plan (HMAP), and 43 Code of Federal Regulations (CFR) 4180.

Maintaining healthy uplands and riparian areas are important to the species of concern (sage grouse, *Stephanomeria malheurensis*, and *Astraglus tetrapterus)* that have been identified in the HMA.

B. Conformance with Land Use Plans

This action is in conformance with the 1971 Wild Horse and Burro Act (as amended) and Title 43 CFR, Part 4700 and the Three Rivers Resource Management Plan (RMP) (1992). The action is also in conformance with the objectives described in the Warm Springs HMAP (1979).

II. PROPOSED ACTION AND ALTERNATIVES

A. Proposed Action

The proposed action is to implement an integrated wild horse management program in the Warm Springs HMA. Emphasis would be placed on achieving and maintaining wild horse AMLs through capture and release operations, administration of fertility control vaccinations, collecting information on herd characteristics, conducting research, and determining herd and vegetative resource health. Capture and release operations would begin in the fall of 2000, or as soon as the project can be funded after this date, and approximately every 3 to 6 years thereafter, depending on vegetative and water resource conditions. Administration of the fertility vaccines would take place during capture operations. Captures would be based on herd numbers and impacts to the resources based on the criteria below. A helicopter census would be conducted prior to a scheduled capture to verify the estimated number of horses. The captured horses would be examined and at least 111 head would be released back into the HMA. The remaining horses would be trucked to the Burns Wild Horse Corrals for preparation and placement in the Bureau of Land Management's (BLM's) wild horse adoption program. Identifying horses for removal would be done using previously established "selective removal" policies. Selection would be based on critical population variables such as sex, age, historic herd characteristics, and genetic viability.

Selective removal may also be used to correct unusual population variables, to maintain herd structure and composition, and to maintain long-term viability. Although most horses removed would be less than 6 years old, some older horses may be included. The animals proposed for removal are derived from *The Wild Horse Population Model Version 3.2* developed by Dr. Steve Jenkins, Associate Professor, University of Nevada Reno. Appendix C establishes the parameters used for this HMA's modeling run.

Horses returned to the range would be representative of the herd's historical characteristics in color and size. Diversity in age structure would be maintained, but most horses returned would be in the prime of their breeding age span and be from 6 to12 years old. The sex ratio of the HMA would be maintained at about 50 percent males and 50 percent females. To enhance and maintain genetic diversity, a few animals with compatible characteristics may occasionally be introduced from other HMAs.

All mares returned to the HMA that are 2 years and older would be injected with the immunocontraceptive, PZP.

The following criteria could trigger a capture of the horses:

- Drought conditions that could cause mortality to horses due to the absence of water.

- Where continued grazing by horses would cause plant mortality that would cause malnutrition in the horses or a downward trend to the vegetative communities due to plant mortality and reduced vigor and productiveness.

- Fires of a severity that remove forage to the extent there is inadequate forage to sustain the population or to allow recovery of native vegetation.

- Utilization levels that reach a point where a continued increase would cause a downward trend in the plant communities and impede meeting standards for rangeland health. This level would be where utilization exceeds 50 percent (the combined total impact of horses, wildlife, and permitted livestock) based on an average year of precipitation and plant growth (on upland vegetation).

  Monitoring indicates that horse use would begin to cause a downward trend in riparian function or not permit the recovery of riparian vegetation determined to be in undesirable condition.

Capturing and administering of the vaccine would be conducted by experienced agency personnel or contractors. Horses would be herded into portable horse traps with a helicopter, sorted in the field and trucked to the Burns Corrals. Capturing would be conducted when soils are dry or frozen and conditions are optimal for safety and protection of the horses and wranglers and, when possible, outside the firearm hunting seasons for big game. Additionally, captures would not be conducted from February 15 through July15, thereby reducing the chance of injury to pregnant mares or mares with young foals, and reducing impacts on strutting and nesting sage grouse. Blood samples may be drawn from approximately 25 percent of the captured horses to establish a genetic baseline.

The trap would be a temporary facility, existing only for the time it is needed to complete the gathering operation. From start to finish, the operation would last about 1-week.

Any captured horses that are found to have the following conditions would be humanely destroyed and disposed of:

a. Showing a hopeless prognosis for life.
b. Suffering from a chronic disease.
c. Requiring continuous care for acute pain and suffering.
d. Not capable of maintaining a Henneke body condition score of one or two.
e. Is a danger to itself or others.

The standard operating procedures identified in Appendix B would be implemented as part of the proposed action.

B. Alternative A

Capture and Release without Administration of Immunocontraceptive Vaccine:

This alternative is the same as the proposed action except that no fertility control vaccines would be administered to the mares being released back into the HMA.

Alternative B

No Action: Horse numbers would be allowed to increase. No attempts would be made at this time to reduce the population to AML or to stabilize the current herd size. Wild horses would be allowed to regulate their numbers through predation, disease, forage, and water and space availability.

C. Alternatives Considered but not Developed

Alternative Gathering Methods

Hay and water trapping. This method requires that forage and water resources be scarce in order to attract the horses to specific locations. This method was not considered because it is not practical nor an efficient method of capture given the broken topography of this area.

Using saddle horses for roundup was not considered because experience has demonstrated this method to be both inefficient and impractical.

Closure of Wild Horse HMA to Livestock

This alternative was not considered because the Wild and Free-Roaming Horse and Burro Act does not require these areas be managed exclusively for wild horses. In addition, the RMP provides for maintaining a horse herd population and for horses and livestock grazing together.

Increasing or Decreasing AMLs within the HMA

Changing AMLs within the HMA is an RMP decision and is therefore outside the scope of this analysis.

D. Monitoring

Annual monitoring for utilization and use patterns would continue. Census work to verify horse numbers would be conducted periodically and prior to capture.

III. AFFECTED ENVIRONMENT

A. Landform and Climate

The Warm Springs HMA is about 30 air miles southwest of Burns, Oregon. The HMA covers approximately 457,000 acres of public land, with gently-rolling, long, wide ridges and broad valleys. Numerous playas exist in the valley bottoms.

The elevation ranges from 4,100 feet to 5,400 feet at the top of Iron Mountain. Annual precipitation is primarily in the form of winter snow and spring rains, approximately 8 to 10 inches per year. Temperatures range from lows of about 0 to -10 °F in the winter to about 90 to 100 °F in the summer.

B. Wild Horses

The Warm Springs herds are saddle-type stock of which abut 50 percent exhibit Appaloosa characteristics and the remainder are a variety of colors. The HMA also contains a small population of burros. Their ancestry is primarily animals abandoned by homesteaders and escaped or released animals from local ranches prior to 1971. The average adult horse weighs from 950 to 1,300 pounds. The burros are generally dark brown and grey color phases, and are 12 to 13 hands in size. Herd characteristics and use patterns have changed little since 1991.

The Three Rivers RMP allocated 2,424 AUMs of forage in the HMA to support up to 202 horses while maintaining a thriving ecological balance. AML is 111 to 202 horses.

Horses in this HMA were last captured in November 1996.

For additional information on animal characteristics and behavior, see Appendix D.

C. Areas of Critical Environmental Concern

The Foster Flat Area of Critical Environmental Concern (ACEC) falls within the Warm Springs HMA. The primary management goal of the ACEC is to preserve the characteristics of the ecosystem and to provide areas for ecological studies, monitoring and research, and education. This ACEC represents a playa landform and vegetation type environment. The entire ACEC is fenced to exclude cattle and horses.

D. Livestock Grazing

Livestock grazing is authorized in the HMA. The Warm Springs HMA includes pastures from two allotments; West Warm Springs and East Warm Springs. The entire HMA area is grazed on a rotational system from approximately May 1 to September 30.

Past evaluations of the grazing allotments have concluded that the present allocation for horses, wildlife, and livestock are at the appropriate level when all the limiting factors are considered, such as water and forage availability.

E. Wildlife

Wildlife species common to the HMA include pronghorn antelope, mule deer, coyote, bobcat, and jackrabbit. Many songbirds, reptiles, raptors, and small mammals also exist in the HMA.

F. Special Status Species

Sage grouse, *Stephanomeria malheurensis* and *Astragalus tetrapterus* are Special Status species existing in the HMA.

G. Vegetation

The vegetation in the HMA varies with the topography and soils. The primary shrub species found are mountain big sagebrush, rabbitbrush, and low sagebrush. Grasses common include bluebunch wheatgrass, squirreltail, Idaho fescue, needlegrass, cheatgrass, and Sandberg bluegrass.

Currently, the area is quite free of invasive, nonnative weed species. No major problem areas have been identified.

H. Soils

The soils are generally shallow and rocky on the hills and ridges and shallow to moderately deep loams on the slopes.

I. Water Quality

The entire HMA has limited water sources. Even though the HMA is fairly large, horse distribution and use is quite constrained due to the scarcity of water sources. Most water sources consist of range improvements such as water holes. Buzzard Creek is the primary native water source. Water quality has been determined to be poor due to temperature and sediment. Much of the creek has been fenced to improve water quality.

J. Recreation

Recreation pursuits within the HMA include horse viewing and hunting for antelope and deer. Generally, most of the area is very remote and receives very little recreational use.

Most of the area is managed as Visual Resource Management (VRM) Class IV which allows for the modification of the landscape character.

Currently, vehicle travel in the HMA is limited to existing roads and trails except for minimal administrative uses such as wild horse gathering and search and rescue operations.

K. Cultural and Historic Resources

The HMA contains a variety of cultural resources with the majority being prehistoric and lithic scatters.

IV. ENVIRONMENTAL CONSEQUENCES

The following critical elements of the human environment are either not present or would not be impacted by the proposed action or the no action alternative: Threatened or endangered species, floodplains, air quality, prime or unique farmlands, Wild and Scenic Rivers, American Indian religious concerns, hazardous wastes, wilderness or Wilderness Study Areas.

A. Wild Horses

Proposed Action: Maintenance of a herd population of 111 to 202 head would reduce competition for forage and water with livestock and wildlife in the HMA. Balancing animal numbers with the forage resource would protect and maintain the viability of the horse herds and will allow a thriving natural ecological balance on the rangelands involved. The selective removal of horses mostly less than 6 years old would provide the highest potential for successful adoption. Returned horses would maintain herd characteristics and animals in prime breeding age classes to ensure herd viability. The occasional introduction of animals from other HMAs would maintain genetic diversity.

Fertility control research conducted to date indicates that PZP immunocontraception is approximately 75 percent effective in the first year, with reproductive success returning to normal in the year following fertility control. There would be no significant increase in stress above that normally associated with processing and sorting of animals during a capture.

By extending the period of time between captures, the herd's population would experience a decrease in stress. Mares not supporting young would be expected to experience an increase in health and condition during their nonproductive time.

Horses would experience stress and a small percentage may be injured during the capture and transport to the corrals. Although, most injuries would be minor such as scrapes, bites, and bruises, it is possible that a horse could be seriously injured or die. Twenty-five years of experience have shown this occurrence to be less than 1-percent of the horses gathered. Experienced horse wranglers and standardized capture and transportation procedures would minimize risks to both horses and wranglers.

There is potential for young foals to become separated from their mothers. Every effort would be made to reunite the foal and mother.

Adopted horses would undergo a lifestyle change. They would no longer face the rigors of survival on a daily basis such as predators and searching for food and water. They would also lose their "wild and free-roaming" behaviors. For additional affects, see Appendices D and E.

Alternative A: Impacts to the horses would be similar to the proposed action. The difference is that the mares being released back into the HMA would not be stressed during the administration of the fertility vaccine and their fertility cycle would not be interrupted.

Alternative B: Increased numbers of horses would create greater competition for forage and water among themselves and between cattle and wildlife. Reduced forage resources may increase the chances for winter mortality, especially with deep snows and crusting. Unmanaged populations would eventually stabilize at high numbers as food and water become limiting due to the ecological carrying capacity and mortality increases from lack of forage and increased incidence of disease. Effects on the age distribution could not be predicted as different environmental events would affect different segments of the population disproportionately.

B. Livestock Grazing

Proposed Action: Removal of excess horses would reduce competition for forage with livestock. Future competition for forage would be delayed 1 or 2 years due to the slower buildup of the herd.

Alternative A: The impacts would be the same as the proposed action except that the herd would rebuild sooner than the proposed action.

Alternative B: Horses in excess of the AML consume more forage than they are allocated, thus lowering the available forage for livestock. This discrepancy may be great or small, depending on the current year's forage productivity and the number of horses occupying the HMA.

C. Wildlife

Proposed Action: Wildlife would be temporarily disturbed or displaced during helicopter capturing operations. Wildlife dependant on the riparian areas around Buzzard Canyon would benefit by the reduced number of horses.

Alternative A: The impacts to wildlife would be the same as the proposed action.

Alternative B: Increases in horse numbers would eventually cause direct competition for forage with antelope and deer on the winter range. Herbaceous plants, important to birds and small mammals for forage and habitat, would decrease causing hardship for those animal species.

D. Special Status Species

Proposed Action: The proposed action would have no negative impacts on any Special Status species.

Alternative A: The impacts would be the same as the proposed action.

Alternative B: If the horse herd population is permitted to continue to increase, over time the cumulative impact on the uplands could have a negative effect on sage grouse brood rearing habitat. Horses trampling the streambanks and reducing riparian vegetation year-round would degrade the habitat through increased sediment loads in Buzzard Creek.

E. Vegetation

Proposed Action: Short-term disturbance to vegetation would occur in small localized areas (less than 5 acres) as a result of setting up and utilizing temporary horse traps. The vegetation would recover on the site within 1 to 2 years.

Removing about 160 head of horses from the HMA would reduce the forage utilization levels and maintain and improve the condition of vegetation and meet standards for rangeland health (see Appendix F). Plant vigor, standing herbaceous cover, seed production, and litter would all increase in the heavily used areas.

Riparian vegetation around the heavily used springs and Buzzard Creek would improve with reduced grazing and trampling. Vegetation would have a longer period of time to recover and improve in vigor and density due to the slower buildup of the herd's population.

Alternative A: Impacts would be similar to the proposed action. Following the removal of approximately 160 horses, the recovery period of the vegetation would be 1 to 2 years shorter due to the more rapid population buildup than the proposed action.

Alternative B: Riparian and upland vegetation near reliable water sources would be reduced as a result of continuous seasonlong grazing by increased numbers of wild horses. Utilization studies are presently showing heavy to severe grazing on the native, perennial grasses on flat to gentle slopes within 1-mile of reliable water sources during the critical growing period of spring and early summer. As the native bunchgrasses are removed by continuous, seasonlong grazing, the resulting open spaces could be colonized by invasive, nonnative weed species such as medusahead. Continued increases in horse numbers would result in rangeland health standards not being met.

F. Soils

Proposed Action: Temporary, short-term disturbance and compaction would occur at the trap sites from vehicles and trampling by horses.

The return of vegetative vigor and accumulation of litter from decreased grazing pressure would provide better soil stability and enrichment from organic material. With fewer horses in the area, compaction of the soil from trampling would be reduced for a longer period of time.

Alternative A: Soils would be impacted sooner under this alternative than the proposed action.

Alternative B: As more vegetation is removed from the surface due to heavy and severe grazing pressure, the soil would become more exposed to wind and water erosion. Trampling would affect more area around watering sites by reducing water holding capacity and trails used by horses would become wider and deeper.

G. Water Quality

Proposed Action: The removal of excess horses from the HMA would have a positive effect on Buzzard Creek. Riparian vegetation would have an additional 1 to 2 year period to recover because the horse population would be increasing at a slower rate.

Alternative A: The impacts would be similar to the proposed action. The riparian vegetation would have 1 to 2 years less to recover before they again exceed AML.

Alternative B: An increase in horse numbers would increase their presence at the spring areas and riparian areas, primarily Buzzard Creek, resulting in poorer water quality and damage to the riparian vegetation.

H. Recreation

Proposed Action: The opportunity for viewing horses by people who like to drive through the back country would be reduced for 1 to 3 years due to fewer horses. The recreating public would not notice a slower population buildup.

Alternative A: The impacts would be the same as the proposed action.

Alternative B: No disruptions to recreational activities would occur. Increased numbers of horses would improve horse viewing in the HMAs. However, horse numbers that caused animals to be in a starved condition (ribs showing, low vigor, etc.) would be unacceptable to the public.

I. Cultural Resources

Proposed Action: No impacts to historic or prehistoric sites are anticipated. If historic or prehistoric sites are found within the area of effect, the impact caused by the proposed action would be mitigated through avoidance. Gathering facilities would be located in an area that contains no historical or prehistoric sites.

Alternative A: The impacts would be the same as the proposed action.

Alternative B: Excessive trampling near water sources from too great horse numbers may negatively impact archaeological sites.

J. Social

No impacts to minorities, American Indian groups or economically disadvantaged groups (E.O. 12898) were identified under the proposed action or any of the alternatives.

V. CUMULATIVE IMPACTS

Proposed Action: There are no anticipated cumulative impacts associated with the proposed action.

Alternative A: The cumulative impacts would be the same as the proposed action.

Alternative B: Over time, if horse numbers were permitted to increase indefinitely in the HMA, permanent damage to the vegetation, riparian areas, and soil resources could occur. Other resources, such as wildlife, recreation, and livestock grazing would be indirectly affected by the cumulative impacts. The health of the wild horse herd would most likely suffer from reduced forage.

VI. CONSULTATION AND COORDINATION

A. Participating Staff

Bill Andersen, Range Management Specialist
Dean Bolstad, Wild Horse Management Specialist
Rudy Hefter, Supervisory Natural Resource Specialist
Jim King, Range Management Specialist
Fred Taylor, Wildlife Biologist
Nora Taylor, Botanist
Scott Thomas, Archaeologist

B. Persons, Groups, and Agencies that will be or have been Consulted

Oregon Department of Fish and Wildlife

APPENDIX A

WARM SPRINGS HERD AREA

The utilization levels are an average level over the two allotments comprised of more than 450,000 acres. Within this large area there are areas that are being excessively grazed due to the high number of horses and season-long grazing.

WILD HORSE AND LIVESTOCK USE IN THE WEST WARM SPRINGS ALLOTMENT

Since 1997

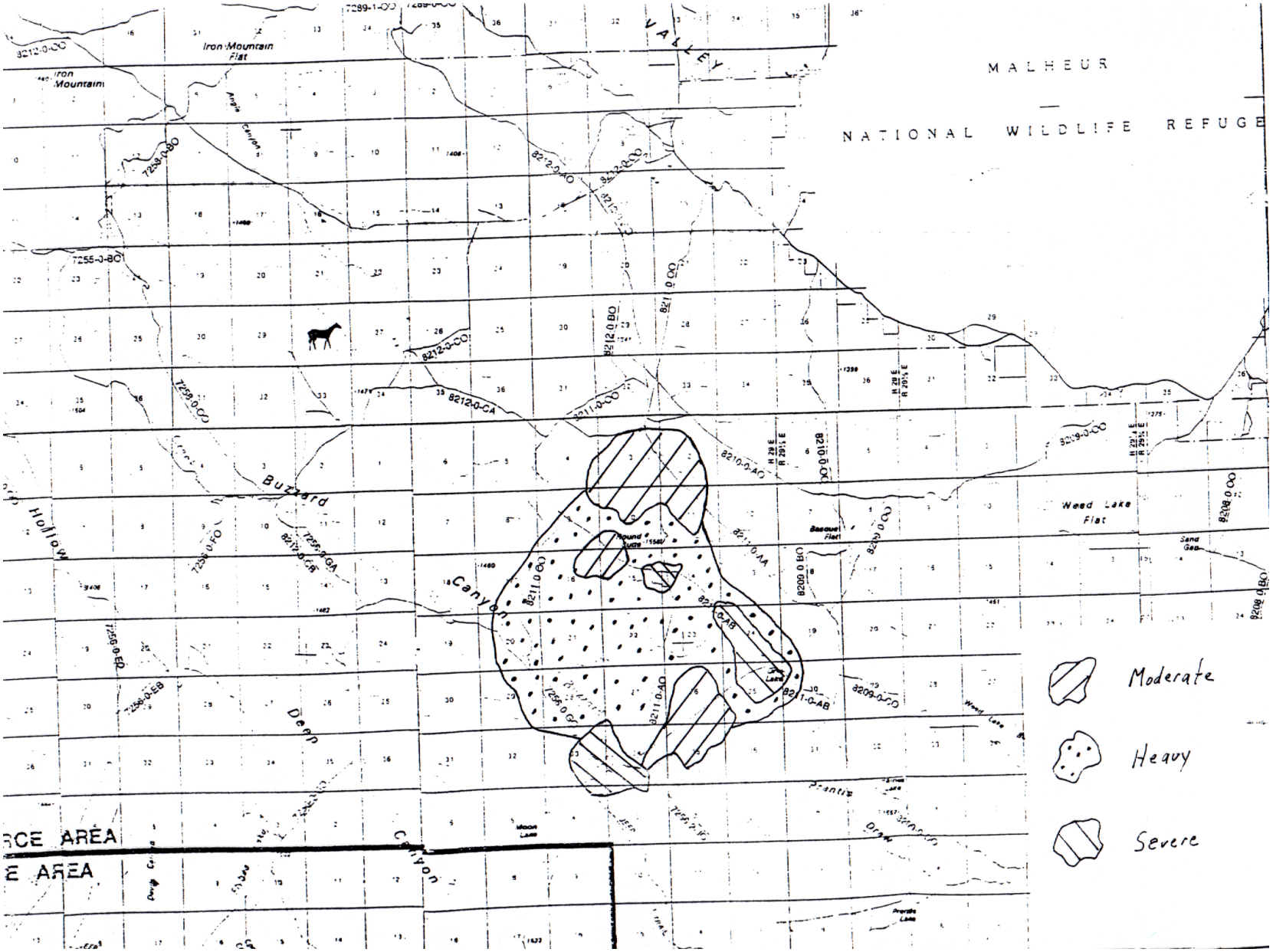
Year	Livestock & Wild Horse Forage Utilization	Livestock Actual Use (AUMs)	Active Livestock Grazing Preference (AUMs)	Precipitation - Percent of Normal
1997	42%	7898	11,167	131%
1998	27%	6836	11,167	162%
1999	28%	7029	11,167	122%

Spring 2000 utilization in the Moon Use Area - Round Butte Reservoir to Dry Lake to Buzzard Springs to the North end of the Buzzard Creek Exclosure in April of 2000 was estimated at 85% on the 1999 residual forage and 50% of the current 2000 growth. See Attached Map. This utilization was due to the large population of wild horses that have been in this area since November 1996. The June 26, 2000 census found 99 head in this area.

WILD HORSE AND LIVESTOCK USE IN THE EAST WARM SPRINGS ALLOTMENT

Since 1997

Year	Livestock & Wild Horse Forage Utilization	Livestock Actual Use(AUMs)	Active Livestock Grazing Preference (AUMs)	Precipitation - Percent of Normal
1997	24%	4120	8225	130
1998	38%	4317	8225	131
1999	32%	4708	8225	150


MALHEUR
NATIONAL WILDLIFE REFUGE
Iron Mountain Flat
Iron Mountain
Buzzard Hollow
Dean Canyon
Weed Lake Flat
Moderate
Heavy
Severe

APPENDIX B - STANDARD OPERATING PROCEDURES

A. Methods for Humane Capture Wild Horses or Burros

Helicopter Removals with or without a Contract

The helicopter method employed for this capture operation requires that horses (or burros) be herded to a trap of portable panels and on extremely rare occasions to ropers who, after roping the animal, will bring it to the trap. Gathering would be conducted by using agency personnel or contractors experienced in the humane capture and handling of wild horses (or burros). The same rules apply whether or not a contractor or Bureau of Land Management (BLM) personnel are used. The following stipulations and procedures will be followed during the contract period to ensure the welfare, safety and humane treatment of the wild horses (or burros) in accordance with the provisions of 43 CFR 4700.

1. Capture Methods That May Be Used in the Performance of a Helicopter Gather

a. Helicopter Drive Trapping

This capture method will involve driving horses into a pre-constructed trap using a helicopter. The trap is constructed of portable steel panels consisting of round pipe. Wings are constructed off the ends of the panel trap to aid in funneling horses into the trap. The wings are constructed of natural jute, (or similar netting which will not injure a horse), which is hung on either trees or long steel posts. This sort of wing forms a very effective visual barrier to the horses that they typically will not run through. When the trap is ready for use, a helicopter will start moving one band of horses at a time toward the trap and into the wings.

In heavily wooded areas, it may be necessary to use wranglers in support of the helicopter to move the horses. The helicopter will act more as a spotter for the ground crew in this situation.

The Contractor/BLM shall attempt to keep bands intact except where animal health and safety become considerations which would prevent such procedures. The Contractor/BLM shall ensure that foals shall not be left behind.

At least one saddle-horse should be immediately available at the trap site to perform roping if necessary. Roping shall be done as determined by the Contracting Officer's Representative (COR) or Project Inspector (PI). Under no circumstances shall animals be tied down for more than 1-hour.

Domestic saddle horses may also be used to assist the helicopter pilot (on

the ground) during the gather operation, by having the domestic horse act as a pilot (or "Judas") horse on the ground, leading the wild horses into the trap site. Individual ground hazers and individuals on horseback may also be used to assist in the gather.

b. Helicopter Assisted Roping

Capture attempts may be accomplished by utilizing a helicopter to drive animals to ropers. Under no circumstances shall horses or burros be tied down for more than 1-hour.

Roping shall be performed in such a manner that bands will remain together. Foals shall not be left behind.

2. Contract Helicopter, Pilot, and Communications

The Contractor must operate in compliance with Federal Aviation Regulations, Part 91. Pilots provided by the contractor shall comply with the Contractor's Federal Aviation Certificates, applicable regulations of the State in which the gather is located.

When refueling, the helicopter shall remain a distance of at least 1,000 feet or more from animals, vehicles (other than fuel truck), and personnel not involved in refueling.

The COR/PI shall have the means to communicate with the Contractor's pilot at all times. If communications cannot be established, the Government will take steps as necessary to protect the welfare of the animals. The frequency(ies) used for this contract will be assigned by the COR/PI when the radio is used. The Contractor shall obtain the necessary FCC licenses for the radio system.

The proper operation, service and maintenance of all Contractor-furnished helicopters is the responsibility of the Contractor. The BLM reserves the right to remove from service pilots and helicopters which, in the opinion of the Contracting Officer (CO) or COR/PI, violate contract and FAA rules, are unsafe or otherwise unsatisfactory. In this event, the Contractor will be notified in writing to furnish replacement pilots or helicopters within 48 hours of notification. All such replacements must be approved in advance of operation by the CO or his/her representative.

All incidents/accidents occurring during the performance of any delivery order shall be immediately reported to the COR.

3. Noncontract Helicopter Operations

An Aircraft Safety Plan and flight hazard analysis will be appropriately approved and filed and copies distributed to the necessary individuals prior to commencing the removal operation. Daily flight plans will also be filed. If a BLM contract helicopter is used, all BLM, Aircraft Safety and Operations standards will be adhered to.

There will be daily briefings with the helicopter pilot, Authorized Officer and all personnel involved in the day's operation. The purpose of this meeting is to discuss in detail all information gathered during the familiarization flight such as hazards, location of horses, potential problems, etc. Discuss any safety hazards anticipated for the coming day's operation or any safety problems observed by the Authorized Officer or anyone else, outline the plan of action, delineate course of actions, specifically position the hazers and their responsibilities, logistics, and timing. After each flight, removal personnel will discuss any problems and suggest solutions. This may be accomplished over the radio or on the ground as the need dictates.

A flight operations plan will be filed with the Burns Interagency Communication Center (BICC). This plan will describe the area to be flown and the expected time frames of flight operations. A weather forecast will be acquired from the dispatcher. There will be no flights on days of high or gusty, erratic winds or days with poor visibility.

Two-way radio communication between the helicopter and the ground crew will be maintained at all times during the operation.

An operation or Contractor's log will be maintained for all phases of the operation. The log will be as detailed as possible and will include names, dates, places and other pertinent information, as well as, observations of personnel involved.

4. Animal Handling and Care

Prior to any gathering operations, the COR/PI will provide for a pre-capture evaluation of existing conditions in the gather areas. The evaluation will include animal condition, prevailing temperatures, drought conditions, soil conditions, road conditions, and a topographic map with location of fences, other physical barriers, and acceptable trap locations in relation to animal distribution.

The evaluation will determine whether the proposed activities will necessitate the presence of a veterinarian during operations. If it is determined that capture efforts necessitate the services of a veterinarian, one would be obtained before capture would proceed.

The Contractor will be appraised of the all conditions and will be given instructions regarding the capture and handling of animals to ensure their health and welfare is protected.

The Authorized Officer and pilot may take a familiarization flight identifying all natural hazards (rims, canyons, winds) and man-made hazards in the area so that helicopter flight crew, ground personnel, and wild horse safety will be maximized. Aerial hazards will be recorded on the project map.

No fence modifications will be made without authorization from the Authorized Officer. The Contractor/BLM shall be responsible for restoration of any fence modification which has been made.

If the route the Contractor/BLM proposes to herd animals passes through a fence, opening should be large enough to allow free and safe passage. Fence material shall be rolled up and fence posts will be removed or sufficiently marked to ensure safety of the animals. The standing fence on each side of the gap will be well flagged or covered with jute or like material.

Wings shall not be constructed out of materials injurious to animals and must be approved by the Authorized Officer.

It is the responsibility of the Contractor/BLM to provide security to prevent loss, injury or death of captured animals until delivery to final destination.

Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than 3 hours. Animals that are to be released back into the capture area may need to be transported back to the original trap site. This determination will be at the discretion of the COR.

Branded or privately-owned animals captured during gather operations will be handled in accordance with State estray laws and existing BLM policy.

Capture methods will be identified prior to issuance of delivery orders. Regardless of which methods are selected, all capture activities shall incorporate the following:

a. Trap Site Selection

The Authorized Officer will make a careful determination of a boundary line to serve as an outer limit within which horses will be herded to a selected trap site. The Authorized Officer will ensure that the pilot is fully aware of all natural and man made barriers which might restrict free movement of horses. Topography, distance, and current condition of the horses are factors that will be considered to set limits to minimize stress on horses (or burros).

Gather operations will be monitored and restricted (if necessary) to assure the body condition of the horses are compatible with the distances and the terrain over which they must travel. Pregnant mares, mares with small colts, and other horses would be allowed to drop out of bands which are being gathered if required to protect the safety and health of the animals.

All trap and holding facility locations must be approved by the Authorized Officer prior to construction. The situation may require moving of the trap. All traps and holding facilities not located on public land must have prior written approval of the landowner.

Trap sites will be located to cause as little injury and stress to the animals, and as little damage to the natural resources of the area, as possible. Sites will be located on or near existing roads. Additional trap sites may be required, as determined by the Authorized Officer, to relieve stress to the animals caused by specific conditions at the time of the gather (i.e., dust, rocky terrain, temperatures, etc.).

b. Trap/Facility Requirements

All traps, wings, and holding facilities shall be constructed, maintained and operated to handle the animals in a safe and humane manner and be in accordance with the following:

Traps and holding facilities shall be constructed of portable panels, the top of which shall not be less than 72 inches high for horses and 60 inches for burros, and the bottom rail of which shall not be more than 12 inches from ground level. All traps and holding facilities shall be oval or round in design.

All loading chute sides shall be fully covered with plywood (without holes) or like material. The loading chute shall also be a minimum of 6 feet high.

All runways shall be of sufficient length and height to ensure animal and wrangler safety, and may be covered with plywood, burlap, plastic snow fence or like material a minimum of 1-foot to 5 feet above ground level for burros and 1-foot to 6 feet for horses.

If a Government-furnished portable chute is used to restrain, age or to provide additional care for animals, it shall be placed in the runway in a manner as instructed by or in concurrence with the Authorized Officer.

All crowding pens including the gates leading to the runways may, if necessary to prevent injuries from escape attempts, be covered with a material which prevents the animals from seeing out (plywood, burlap, snow fence, etc.) and should be covered a minimum of 1-foot to 5 feet above ground level for burros and 2 feet to 6 feet for horses.

When holding facilities are used and alternate pens are necessary to separate mares or jennies with small foals, animals which will be released, sick and injured animals, and estrays from the other animals or to facilitate sorting as to age, number, size, temperament, sex, and condition. They will be constructed to minimize injury due to fighting and trampling. In some cases, the Government will require that animals be restrained for determining an animal's age or for other purposes. In these instances, a portable restraining chute will be provided by the Government. Either segregation or temporary marking and later segregation will be at the discretion of the COR.

If animals are held in the traps and/or holding facilities, a continuous supply of fresh clean water at a minimum rate of 10 gallons per animal per day will be supplied. Animals held for 10 hours or more in the traps or holding facilities shall be provided good quality hay at the rate of not less than two pounds of hay per 100 pounds of estimated body weight per day.

Separate water troughs shall be provided at each pen where animals are being held. Water troughs shall be constructed of such material (e.g., rubber, rubber over metal) so as to avoid injury to animals.

When dust conditions occur within or adjacent to the trap or holding facility, the Contractor/BLM shall be required to wet down the ground with water.

5. Treatment of Injured or Sick; Disposition of Terminal Animals

The Contractor/BLM shall restrain sick or injured animals if treatment is necessary. A veterinarian may be called to make a diagnosis and final determination. Destruction shall be done by the most humane method available. Authority for humane destruction of wild horses (or burros) is provided by the Wild Free-Roaming Horse and Burro Act of 1971, Section 3(b)(2)(A), 43 CFR 4730.1, BLM Manual 4730 - Destruction of Wild Horses and Burros and Disposal of Remains, and is in accordance with BLM policy as expressed in Instructional Memorandum No. 98-141.

Any captured horses that are found to have the following conditions may be humanely destroyed:

a. The animal shows a hopeless prognosis for life.
b. Suffers from a chronic disease.
c. Requires continuous care for acute pain and suffering.
d. Not capable of maintaining a body condition rating of one or two.
e. The animal is a danger to itself or others.

The Authorized Officer will determine if injured animals must be destroyed and provide for destruction of such animals. The Contractor/BLM may be required to dispose of the carcasses as directed by the Authorized Officer.

The carcasses of the animals that die or must be destroyed as a result of any infectious, contagious, or parasitic disease will be disposed of by burial to a depth of at least 3 feet.

The carcasses of the animals that must be destroyed as a result of age, injury, lameness, or noncontagious disease or illness will be disposed of by removing them from the capture site or holding corral and placing them in an inconspicuous location to minimize visual impacts. Carcasses will not be placed in drainages regardless of drainage size or downstream destination.

6. Motorized Equipment

All motorized equipment employed in the transportation of captured animals shall be in compliance with appropriate State and Federal laws and regulations applicable to the humane transportation of animals. The Contractor shall provide the Authorized Officer with a current safety inspection (less than 1-year-old) of all tractor/stock trailers used to transport animals to final destination.

Vehicles shall be in good repair, of adequate rated capacity, and operated so as to ensure that captured animals are transported without undue risk or injury.

Only stock trailers with a covered top shall be allowed for transporting animals from trap site(s) to temporary holding facilities. Only stock trailers, or single deck trucks shall be used to haul animals from temporary holding facilities to final destination(s). Sides or stock racks of transporting vehicles shall be a minimum height of 6 feet 6 inches from the vehicle floor. Single deck trucks with trailers 40 feet or longer shall have two partition gates providing three compartments within the trailer to separate animals. The compartments shall be of equal size plus or minus 10 percent. Trailers less than 40 feet shall have at least one partition gate providing two compartments within the trailer to separate animals. The compartments shall be of equal size plus or minus 10 percent. Each partition shall be a minimum of 6 feet high and shall have at the minimum a 5-foot wide swinging gate. The use of double deck trailers is unacceptable and will not be allowed.

All vehicles used to transport animals to the final destination(s) shall be equipped with at least one door at the rear end of the vehicle, which is capable of sliding either horizontally of vertically. The rear door must be capable of opening the full width of the trailer. All panels facing the inside of all trailers must be free of sharp edges or holes that could cause injury to the animals. The material facing the inside of the trailer must be strong enough, so that the animals cannot push their hooves through the sides. Final approval of vehicles to transport animals shall be held by the Authorized Officer.

Floors of vehicles, trailers, and the loading chute shall be covered and maintained with materials sufficient to prevent the animals from slipping.

Animals to be loaded and transported in any vehicle or trailer shall be as directed by the Authorized Officer and may include limitations on numbers according to age, size, sex, temperament, and animal condition. The minimum square footage per animal is as follows:

11 square feet/adult horse (1.4 linear foot in an 8-foot-wide trailer)
8 square feet/adult burro (1.0 linear foot in an 8-foot-wide trailer)
6 square feet/horse foal (0.75 linear foot in an 8-foot-trailer)
4 square feet/burro foal (0.50 linear foot in a 8-foot-wide trailer)

The Authorized Officer shall consider the condition of the animals, weather conditions, type of vehicles, distance to be transported, or other factors when planning for the movement of captured animals. The Authorized Officer shall provide for any brand and/or inspection services required for the captured animals.

Communication lines will be established with personnel involved in off-loading the animals to receive feedback on how the animals arrive (condition/injury etc.). Should problems arise, gathering methods, shipping methods and/or separation of the animals will be changed in an attempt to alleviate the problems.

If the Authorized Officer determines that dust conditions are such that animals could be endangered during transportation, the Contractor/BLM will be instructed to adjust speed and/or use alternate routes.

Periodic checks by the Authorized Officer will be made as animals are transported along dirt roads. If speed restrictions are in effect the Authorized Officer will at times follow and/or time trips to ensure compliance.

7. Special Stipulations.

Private landowners or the proper administering agency(s) would be contacted and authorization obtained prior to setting up traps on any lands which are not administered by BLM. Wherever possible, traps would be constructed in such a manner as to not block vehicular access on existing roads.

The helicopter would avoid eagles and other raptors, and would not be flown repeatedly over any identified active raptor nests. No unnecessary flying would occur over big game on their winter ranges or active fawning/calving grounds during the period of use.

Standard operating procedures in the siting and construction of traps will avoid adverse impacts from trap siting, construction, or operation to wildlife species, including threatened, endangered, or sensitive species.

8. Herd Health and Viability Data Collection

The following information will be collected form each animal captured: age, sex, color, overall health, pregnancy or nursing status.

In addition, blood or hair samples may be collected from individuals within the herd. Certain other activities including immunocontraceptive research radio collaring, and freeze marking may be conducted.

a. Population Management Plan/Selective Addition or Removal

Blood samples may be taken for the purposes of furthering genetic ancestry studies and incorporation into the Population Management Plans which will be developed for each HMA/complex.

On occasion, it may be necessary to enhance and maintain genetic diversity a few animals with compatible characteristics may be introduced from other HMAs. Introduced animals will be taken from areas with similar habitat.

b. Immunocontraceptive Research

When the immunocontraceptive vaccine is used, delivery of the vaccine will be conducted by trained individuals, using approved delivery methods. The vaccine will be administered to the large muscle on the hip.

9. Public Participation

Prior to conducting a gather a communications plan or similar document summarizing the procedures to follow when media or interested public request information or viewing opportunities during the gather should be prepared.

The public must adhere to guidance from the agency representative and viewing must be prearranged.

10. Safety

Safety of BLM employees, contractors, members of the public, and the wild horses (or burros) will be given primary consideration. The following safety measures will be used by the Authorized Officer and all others involved in the operation as the basis for evaluating safety performance and for safety discussions during the daily briefings:

A briefing between all parties involved in the gather will be conducted each morning.

All BLM personnel, contractors and volunteers will wear protective clothing suitable for work of this nature. BLM will alert observers of the requirement to dress properly. BLM will assure that members of the public are in safe observation areas.

The handling of hazardous, or potentially hazardous materials such as liquid nitrogen and vaccination needles will be accomplished in a safe and conscientious manner by BLM personnel or the contract veterinarian. (Refer to Page 28, Hazardous Materials.)

11. Responsibility and Lines of Communication

The COR and PIs have the direct responsibility to ensure the Contractor's compliance with the contract stipulations.

All employees involved in the gathering operations will keep the best interests of the animals at the forefront at all times.

12. Glossary

Appropriate Management Level - The number of wild horses and burro which can be sustained within a designated herd management area which achieves and maintains a thriving natural ecological balance keeping with the multiple-use management concept for the area.

Authorized Officer - An employee of the BLM to whom has been delegated the authority to perform the duties described in these Standard Operating Procedures. See BLM Manual 1203 for explanation of delegation of authority.

Census - The primary monitoring technique used to maintain a current inventory of wild horses and burros on given areas of the public lands. Census data are derived through direct visual counts of animals using a helicopter.

Contracting Officer (CO) - Is the individual responsible for an awarded contract who deals with claims, disputes, negotiations, modifications and payments. Appoints CORs and PIs.

Contacting Officers Representative (COR) - Acts as the technical representative for the CO on a contract. Ensures that all specifications and stipulations are met. Reviews the Contractor's progress, advises the CO on progress, problems, costs, etc. Is responsible for review, approval, and acceptance of services.

Evaluation - A determination based on studies and other data that are available as to if habitat and population objectives are or are not being met and where an overpopulation of wild horses and burros exists and whether actions should be taken to remove excess animals.

Excess Wild Horses or Burros - Wild free-roaming horses or burros which have been removed from public lands or which must be removed to preserve and maintain a thriving ecological balance and multiple-use relationship.

Genetically Viable - Fitness of a population as represented by its ability to maintain the long-term reproductive capacity of healthy, genetically diverse members.

Health Assessment - Evaluation process based on best available studies data to determine the current condition of resources in relation to potential or desired conditions.

Herd Area - The geographical area identified as having been used by wild horse and burro populations in 1971, at the time of passage of the Wild Free-roaming Horse and Burro Act.

Herd Management Area - The geographical area as identified through the land use planning process established for the long-term management of wild horse and burro populations. The boundaries of the herd management area may not be greater than the area identified as having been used by wild horse and burro populations in 1971, at the time of passage of the Wild Free-Roaming Horse and Burro Act.

Invasive Weeds - Introduced or noxious vegetative species which negatively impact the ecological balance of a geographical area and limit the areas potential to be utilized by authorized uses.

Monitoring - Inventory of habitat and population data for wild horses and burros and associated resources and other authorized rangeland uses. The purpose of such inventories is to be used during evaluations to make determinations as to if habitat and population objectives are or are not being met and where an overpopulation of wild horses and burros exists and whether actions should be taken to remove excess animals.

Project Inspector - Coordinates with the COR assigned to a contract to support his/her responsibility for review, approval, and acceptance of services.

Research - Science based inquiry, investigation or experimentation aimed at increasing knowledge about wild horses and burros conducted by accredited universities or Federal Government research organizations with the active participation of BLM wild horse and burro professionals.

Studies - Science based investigation of specific aspects of wild horse and burro habitat or populations in supplement to established monitoring. These investigations would not be established following rigid experimental protocols and could include drawing blood on animals to study genetics, disease and general health issues and population dynamics such as reproduction and mortality rates and general behavior.

Thriving Natural Ecological Balance - An ecological balance requires that wild horses and burros and other associated animals be in good health and reproducing at a rate that sustains the population, the key vegetative species are able to maintain their composition, production and reproduction, the soil resources are being protected, maintained or improved, and a sufficient amount of good quality water is available to the animals.

APPENDIX C: POPULATION MODELING PARAMETERS

The population model used is Dr. Steve Jenkins Wild Horse Population Model, Version 3.2, as amended. The parameters used in the model for each HMA/Complex are as follows:

a. Each HMA/Complex will have herd specific age/sex information based on best available information and current census numbers.

b. The AML will have a range of 40 percent.

c. Foals will not be included in the count unless census is done after March 1 of each calendar year.

d. Average foaling rate is 20 percent (*unless you have herd specific information*). Sex ratio at birth would be 50 percent males and 50 percent females (*unless you have herd specific information).*

e. The gather cycle for the first gather will be 4 years.

f. Fertility control, if used will be a 1-year vaccine, with a 90 percent effective rate if applied from October 1 to February 28 (primary window). If the animals are primed (using just the PZP part of the vaccine), there will be a 35 percent effective rate. The priming doses would be applied from July 1 to September 30, and would expand the window of application so the effectiveness of the vaccine would similar to primary window the next time the animals were vaccinated.

g. Modeling outputs will consist of a minimum of the removal graph, and with tables displaying the age and sex of animals remaining on the HMA/Complex after the first gather and what is expected to be on the HMA/Complex prior to the next gather.

APPENDIX D: ANIMAL CHARACTERISTICS AND BEHAVIOR

Wild horses in this area likely have many domestic bloodlines in their background including American Quarter Horse, Thoroughbred, Standardbred, and Arabian. Nearly every coat, color, pattern, and combinations thereof can be found within the herds. The diverse phenotypes of wild horses in this area indicate a varied genotype. Habitat conditions are such that the horses are typically in good condition throughout the year.

Wild horse bands typically include a stallion, lead mare, mares with colts, mares without colts, and subordinate males. Bachelor bands (bands of wild horses without any females) are found in this area as are single wild horses that are typically male. Within an area, bands may develop lead and subordinate roles. Subordinate bands are also known as satellite bands.

This relationship is observable by their behavior at water holes. The wild horses' competitive social structure, combined with their size and strength, allows them to compete favorably with wildlife and domestic livestock for water.

Wild horses travel up to 10 miles to water, although two to five mile distances is more common. An adult wild horse normally consumes 10 to 12 gallons of water per day, depending primarily on ambient temperature and the animal's activity. Wild horses usually have adequate water from winter snows and spring runoff that fill reservoirs and intermittent streams. During late summer and early fall wild horses depend on the few perennial sources of water (some reservoirs, streams, springs, and flowing wells) and on wells pumped for domestic livestock and wildlife. The concentration of wild horses around available water becomes a problem when water is scarce. Wild horses may become possessive of available water, resulting in direct competition with livestock and wildlife. Mountain lions may prey on wild horses.

Releases of wild horses would be near available water. Usually, wild horses gathered together would be released together. If the area is new to them, a short-term adjustment period would be required while the wild horses become familiar with the new area. We anticipate no long-term adverse impacts to returned wild horses.

Released wild horses would increase inter-band encounters and confrontations. These encounters should not be detrimental over the short term, however, if horse populations exceed AMLs for an indefinite period, impacts would become consequential. These consequences would be born both by the horses and nearby landowners.

Returns could change the sex ratio within the HMA. This should have no effect on the viability of the remaining population in the near term. Long-term effects would not be anticipated unless the practice were repeated in future actions. For this gather the removal criteria would be to reset normal sex and age ratio.

Returns would increase the average age in the HMA slightly. Recent winters have been comparatively mild, which may have prolonged the life of some older horses. A small-scale increase in mortality of older horses would likely occur in the next normal or severe winter. The loss of these individuals to the population would be short-term as it is unlikely that many of these animals are still reproductively active.

APPENDIX E: SUMMARY OF IMMUNOCONTRACEPTIVE RESEARCH

The formulation would be delivered as an intramuscular injection by a jabstick syringe, CO2 dart, or hand pump air powered dart into the mares in the field. Upon impact the liquid in the chamber would be propelled into the muscle along with the pellets. This delivery method has been previously shown to work. Such a vaccine would permit a single injection to cause one or more years of contraception at approximately 90 percent efficiency. Only trained personnel would mix and/or administer the vaccine.

Previous wild horses immunocontraception research on wild free-roaming horse herds in Nevada has been conducted on the Antelope/Antelope Valley HMAs (1992) (Ely), on the Nevada Wild Horse Range (1996), the Kammas HMA /Antelope HA (1998) (Winnemucca), and the Antelope/Antelope Valley, Sand Springs, and Monte Cristo HMAs (1998) (Ely) utilizing PZP injections. The 1992 Antelope/Antelope Valley HMA's research found that reproductive success was 4.5 percent using two injections, 20.0 percent using one injection plus microspheres, and 28.6 percent using one injection with no microspheres. Reproductive success for mares treated with a placebo was 55.0 percent and untreated mares was 53.9 percent, which was significantly greater than treated mares. The following year, without further treatment, reproductive success was 44.0 percent for mares treated with two injections, and 54.5 percent for untreated mares. Data from the other groups is insufficient for comparison (Turner et al. 1997).

The Nevada Wild Horse Range field study utilized three formulations of a revised controlled release PZP vaccine, with the mares broken up into three groups. The microspheres were designed for longer delay in release and contained adjuvant. Reproductive success was 12.8 percent for Group 1 (two injections), 10.6 percent for Group 2 (two injections) and 11.3 percent for Group 3 (one injection). The lack of difference in fertility rates indicated that the controlled release component in the one injection group provided vaccine exposure equivalent to a second injection of vaccine (Turner et al. 1997).

The data for the Kamma HMA/Antelope HA (1998) has not completely been analyzed, but preliminary data shows approximately 75 percent effectiveness on treated mares. The data for the Antelope/Antelope Valley, Sand Springs, and Monte Cristo HMAs (1998) have not completely been analyzed to show comparative statistics.

Results of fertility control research conducted to date indicate that PZP Immunocontraception is highly effective, and that the reproductive success of the mares returns to normal the year following fertility control. There would be no significant increase in stress above that normally associated with the processing and sorting of animals during a gather.

Wild horse populations would experience a decrease in stress due to extending the period of time between gathers. Mares would experience some stress during the administration of the fertility control drugs and would not produce progeny for 1-year if successful. Mares which are not supporting young would be expected to experience an increase in health and condition during their nonproductive time. Animals would be exposed to potential hazards during treatment.

If contraception is used genetic contributions from individual animals will be only delayed, not removed.

APPENDIX F: STANDARDS FOR RANGELAND HEALTH

The following section identifies the Standards for Rangeland Health, Oregon. The standards are listed with a description of each standard.

Standard 1 - Upland soils exhibit infiltration and permeability rates, moisture storage, and stability that are appropriate to soil, climate, and landform.

Standard 2 - Riparian-wetland areas are in properly functioning physical condition appropriate to soil, climate, and landform.

Standard 3 - Healthy, productive, and diverse plant and animal populations and communities appropriate to soil, climate, and landform are supported by ecological processes of nutrient cycling, energy flow, and hydrologic cycle.

Standard 4 - Surface water and ground water quality, influenced by agency actions, comply with State water quality standards.

Standard 5 - Habitats support healthy, productive, and diverse populations and communities of native plants and animals (including Special Status species and species of local importance) appropriate to soil, climate, and landform.

USDI, Bureau of Land Management
Three Rivers Resource Area, Burns District
Hines, OR 97738

Finding of No Significant Impact
for
Maintaining Viable Populations of Wild Horses
in the Warm Springs Herd Management Area
EA OR-025-98-00

Based on the analysis of potential environmental impacts contained in the Environmental Assessment (EA) and all other available information, I have determined that the proposal and alternatives analyzed do not constitute a major Federal action that would adversely impact the quality of the human environment. Therefore, an Environmental Impact Statement (EIS) is unnecessary and will not be prepared. This determination is based on the following factors:

1. Beneficial, adverse, direct, indirect, and cumulative environmental impacts discussed in the EA have been disclosed. Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests, or the locality. The physical and biological effects are limited to the Burns District, Three Rivers Resource Area and adjacent land.

2. Public health and safety would not be adversely impacted. There are no known or anticipated concerns with project waste or hazardous materials.

3. There would be no adverse impacts to regional or local air quality, prime or unique farmlands, known paleontological resources on public land within the area, wetlands, floodplains, areas with unique characteristics, ecologically critical areas or designated Areas of Critical Environmental Concern (ACECs). There would be no adverse impacts from invasive, nonnative species.

4. There are no highly controversial effects on the environment.

5. There are no effects that are highly uncertain or involve unique or unknown risk. Sufficient information on risk is available based on information in the EA and other past actions of a similar nature.

6. This alternative does not set a precedent for other projects that may be implemented in the future to meet the goals and objectives of adopted Federal, State, or local natural resource-related plans, policies or programs.

7. No cumulative impacts related to other actions that would have a significant adverse impact were identified or are anticipated.

8. Based on previous and ongoing cultural resource surveys, and through mitigation by avoidance, no adverse impacts to cultural resources were identified or anticipated. There are no known American Indian religious concerns or persons or groups who might be disproportionately and adversely affected as anticipated by the Environmental Justice policy.

9. No adverse impacts to any threatened or endangered species or their habitat, that was determined to be critical under the Endangered Species Act, were identified.

10. This proposed action is in compliance with relevant Federal, State, and local laws, regulations, and requirements for the protection of the environment.

_____ _____

Craig M. Hansen Date
Three Rivers Resource Area Field Manager